SAN DIEGO AIRPORT				
Pacific Hwy (Sassafras to Laurel)	**4,800**	**4,500**	**1.07**	**F**
Laurel St (Pac Hwy to Kettner)	**3,300**	**3,000**	**1.10**	**F**
Hawthorn St (Pac Hwy to Kettner)	**2,800**	**2,700**	**1.04**	**F**
Grape St (Pac Hwy to Kettner)	**2,900**	**2,250**	**1.29**	**F**
Pacific Hwy (Grape to Ash)	**3,500**	**5,400**	**0.65**	**B**
North Harbor Dr (Grape to Ash)	**2,700**	**5,400**	**0.50**	**A**
North Harbor Dr (Nimitz to Spanish)	**3,400**	**5,400**	**0.63**	**B**

The intercity highways aggregate roadway demand (total traffic volume), aggregate roadway capacity, and demand to capacity ratio are presented in Table 4.3.

Table 4.3 2020 No-Project Vehicle Demand, Capacity, Total V/C and LOS Across Highway Screenlines

INTERCITY HIGHWAY	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
I-10 (I-5 and East San Gabriel Valley)	**9,175**	**7,800**	**1.18**	**F**
I-10 (East San Gabriel Valley and ONT Airport)	**11,882**	**7,800**	**1.52**	**F**
I-10 (Ontario Airport and I-15)	**11,549**	**7,800**	**1.48**	**F**
I-10 (I-15 and I-215)	**9,265**	**7,800**	**1.19**	**F**
I-15 (I-10 and I-215)	**8,775**	**5,850**	**1.50**	**F**
I-215 (Riverside and I-15)	**8,530**	**5,850**	**1.46**	**F**
I-215 (I-10 and Riverside)	**5,442**	**3,900**	**1.39**	**F**
I-215 (I-15 and Temecula)	**5,850**	**7,800**	**0.75**	**C**
I-15 (Temecula and Escondido)	**6,964**	**6,000**	**1.16**	**F**
I-15 (Escondido and Mira Mesa)	**14,228**	**7,500**	**1.90**	**F**
I-15 (Mira Mesa and SR 163)	**18,066**	**9,000**	**2.01**	**F**
SR 163 (I-15 and I-8)	**9,422**	**7,200**	**1.31**	**F**

It is assumed that the number of bus routes would be similar to the number of routes that currently serve the roadways within the station screenlines. The public transit impacts are summarized in Table 4.4.

Table 4.4 Public Transit Impacts with No-Project Alternative

STATION	Impact
El Monte Station (1A)	**Low**
South El Monte Station (1B)	**Low**
City of Industry Station (1B)	**Low**
Pomona Station (1A)	**Low**
Ontario Station (1A)	**Low**
Colton Station (1A)	**Low**
UCR Station (1A)	**Low**

San Bernardino Station (1C)	**Low**
March ARB Station (1A)	**Low**
Temecula Station (2A)	**Low**
Escondido Rock Springs	**Low**
Mira Mesa	**Low**
Qualcomm	**Low**
Escondido Transit Center	**Low**
UTC Transit Center	**Low**
San Diego Airport	**Low**
Downtown San Diego	**Low**

The truck activity and route designations are assumed to be as the baseline conditions. The impacts are measured by the amount of possible conflict between autos and trucks on the screenline roadways. The results are summarized in Table 4.5.

Table 4.5 Goods Movement Impacts With No-Project Alternative

STATION	Land Use in the Vicinity of the Station	Level of Truck Traffic on Roadways with Station Access
El Monte Station (1A)	**Industrial**	**High**
South El Monte Station (1B)	**Industrial**	**High**
City of Industry Station (1B)	**Industrial/Residential**	**Medium**
Pomona Station (1A)	**Commercial**	**Medium**
Ontario Station (1A)	**Commercial**	**Medium**
Colton Station (1A)	**Vacant**	**Low**
UCR Station (1A)	**Vacant**	**Low**
San Bernardino Station (1C)	**Transpiration & Utilities**	**High**
March ARB Station (1A)	**Vacant**	**Low**
Temecula Station (2A)	**Vacant**	**Low**
Escondido Rock Springs	**Residential**	**Low**
Mira Mesa	**Residential/Commercial**	**Low**
Qualcomm	**Commercial**	**Medium**
Escondido Transit Center	**Commercial and Industrial**	**High**
UTC Transit Center	**Residential**	**Low**
San Diego Airport	**Commercial and Industrial**	**Medium**
Downtown San Diego	**Commercial**	**Low**

Parking impacts are quantified based on assuming that parking availability would be similar to baseline conditions. Estimates of parking impacts are given in Table 4.6.

Table 4.6 Parking Spaces at Stations With No-Project Alternative

STATION	Available Parking	Impact
El Monte Station (1A)	**Low < 100**	**Low**
South El Monte Station (1B)	**Low < 100**	**Low**
City of Industry Station (1B)	**Low < 100**	**Low**
Pomona Station (1A)	**Low < 100**	**Low**
Ontario Station (1A)	**Low < 100**	**Low**

Colton Station (1A)	**N/A***	**Low**
UCR Station (1A)	**N/A***	**Low**
San Bernardino Station (1C)	**Low < 100**	**Low**
March ARB Station (1A)	**N/A***	**Low**
Temecula Station (2A)	**N/A***	**Low**
Escondido Rock Springs	**Low (<100)**	**Low**
Mira Mesa	**Low (<100)**	**Low**
Qualcomm	**Low (<100)**	**Low**
Escondido Transit Center	**Low (<100)**	**Low**
UTC Transit Center	**Low (<100)**	**Low**
San Diego Airport	**Low (<100)**	**Low**
Downtown San Diego	**Low (<100)**	**Low**

* Not applicable, vacant land.

Southern California Association of Governments (SCAG) has estimated that during morning peak hour traffic in some of the heaviest corridors, the average speed is less than 20 MPH in the congested direction. In fact, in 1997 the average traveler spent approximately 18 percent of travel time in congestion delay, with an average commute trip of 15 miles taking about 30 minutes. Under the No-Project scenario which is only regional committed projects, congestion delay in the southern California would increase by 100 percent. The traffic congestion in this corridor is projected to increase considerably in the next 20 years based on comparisons of Existing and No-Project conditions.

4.2 MODAL ALTERNATIVE

4.2.1 Trip Generation by Airport or on Roadway

Ontario International Airport had 6 million annual passengers (MAP) in 1997 and it is forecasted to grow to 25 MAP by 2020 based on SCAG's 2001 Regional Transportation RTP. San Diego International Airport had 12.9 MAP in 1996 and is forecasted to grow to 26 MAP by 2020 based on HNTB's Airport Master Plan Working Paper Number 2, 1998.

The Ontario International Airport cordon consists of Airport Drive (from west and east), Vineyard Avenue (from north) and Archibald Avenue (from north). The San Diego Airport cordon consists of Pacific Highway, Laurel Street, Hawthorn Street, Grape Street, and North Harbor Drive. Trips are assumed to be 63% of HSR Alternative AM peak hour trips attracted to Ontario and San Diego Airport stations.

4.2.2 Distribution of Trips to/from Airport or on Roadway

The major access to the Airport freeways in the vicinity of Ontario International Airport are I-10 on North, I-15 on East and SR-60 on South. The major local access to Ontario International Airport is via Airport Drive (from west and east), Vineyard Avenue (from north) and Archibald Avenue (from north) and trips from and to the airport are estimated to be evenly distributed among the three roads as shown in Figure 4.1. At San Diego International Airport, traffic uses the I-5 freeway and the local streets including Harbor Drive, Pacific Highway, and Washington Street as shown in Figure 4.2. Distribution of trips for the highway component of the modal alternative would primarily follow existing distribution patterns except where new interchanges or access/egress ramps would be created.

4.2.3 Roadway Impacts by Screenline or Cordon

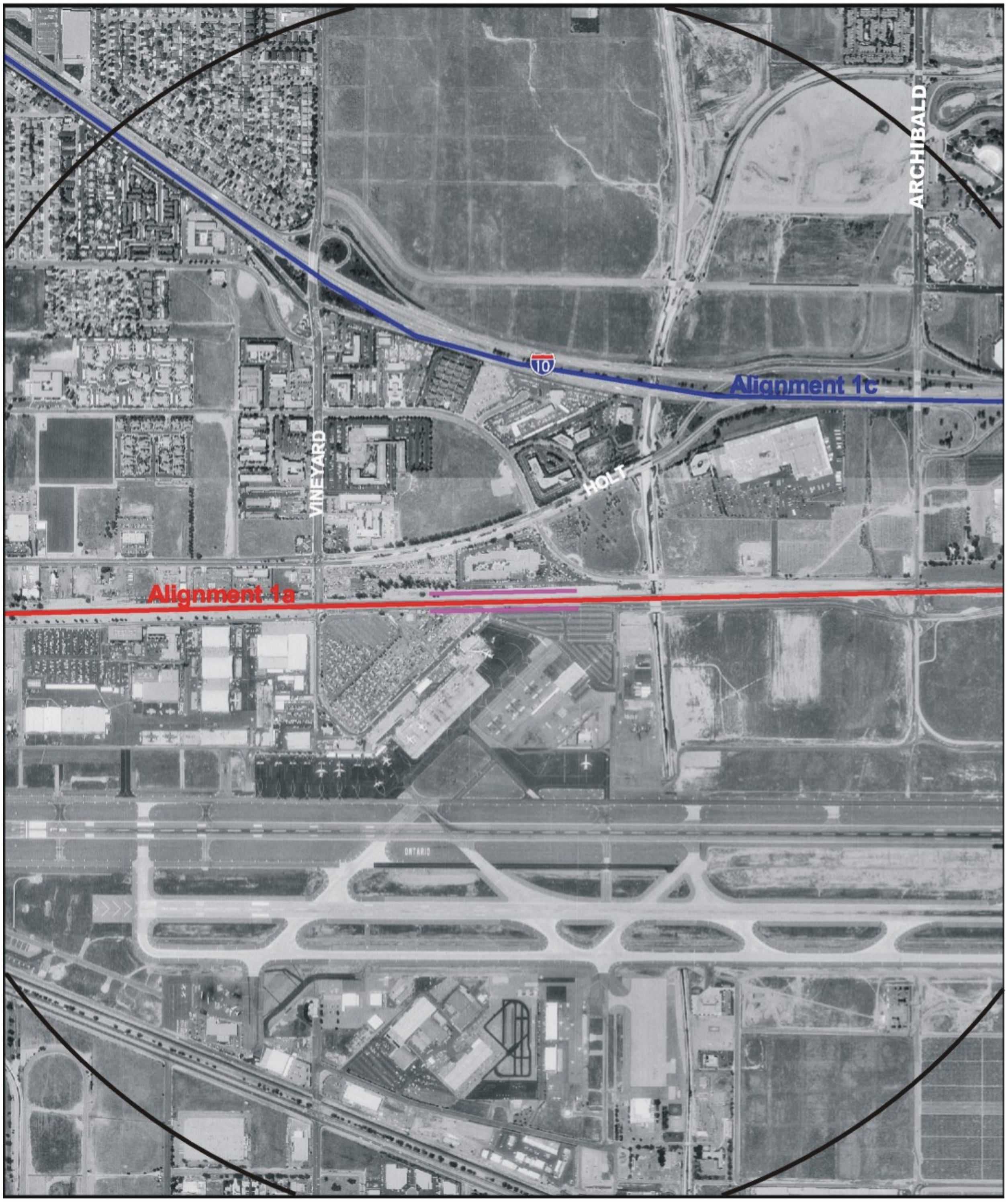
For the aviation component, Ontario International Airport is located within easy access to major freeways including the I-10, I-15 and SR-60. San Diego International Airport is located immediately adjacent to I-5. For the highway component, the assumed addition of two additional travel lanes in each direction on the I-10, I-15, I-215, and SR-163 freeways as part of the highway component of the modal alternative would increase mainline capacity thus reducing congestion along these freeways. It would also increase traffic levels overall and create the potential for localized impacts at ramp junctions and freeway interchanges. The stations' and airports' aggregate roadway demand (total traffic volume), aggregate roadway capacity, demand to capacity ratio and impact level are presented in Table 4.7.

Table 4.7 2020 Modal Alternative Vehicle Demand and Capacity Across Station Screenlines

STATION	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
El Monte Station (1A)	6,112	7,500	0.81	D
South El Monte Station (1B)	4,316	6,250	0.69	B
City of Industry Station (1B)	6,876	7,350	0.94	E
Pomona Station (1A)	12,127	15,000	0.81	D
Ontario Station (1A)	10,344	13,800	0.75	C
Colton Station (1A)	6,306	12,675	0.50	A
UCR Station (1A)	2,119	4,700	0.45	A
San Bernardino Station (1C)	5,990	14,550	0.41	A
March ARB Station (1A)	4,397	7,800	0.56	A
Temecula Station (2A)	1,697	3,200	0.53	A
Escondido Rock Springs (2A2)	6,280	11,400	0.55	A
Mira Mesa (3A1)	15,040	21,300	0.71	C
Qualcomm (3A1)	8,400	12,300	0.68	B
Escondido Transit Center (2B1)	12,050	13,500	0.89	D
UTC Transit Center (3B2)	7,240	14,400	0.50	A
San Diego Airport (3B2)	14,816	16,500	0.90	D
Downtown San Diego (3B2)	12,890	18,000	0.72	C

The airport's aggregate roadway demand (total traffic volume), aggregate roadway capacity, and demand to capacity ratio are presented in Table 4.8.

Figure 4.1 San Diego Downtown Station Segment 3B



Airport Dr WB (Commerce Pkwy and Haven) 25%
Airport Dr EB (Grove and Vineyard) 25%
Vineyard (D St and Holt) 25%
Archibald (I-10 Fwy and Airport Dr) 25%

Figure 4.2 San Diego Downtown Station Segment 3B

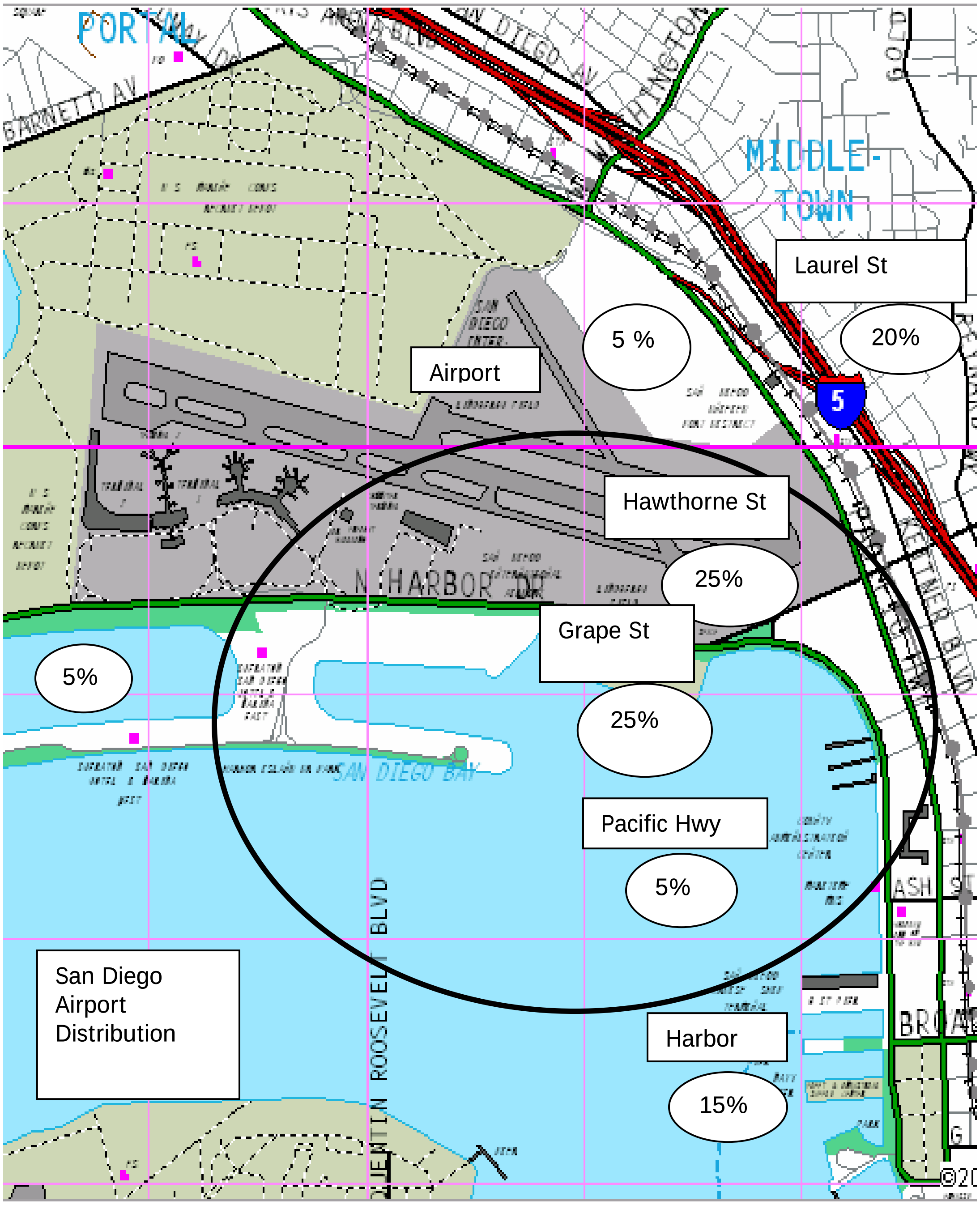


Table 4.8 2020 Modal Alternative Vehicle Demand and Capacity Across Airport Screenlines

AIRPORT and CORDON STREETS	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
ONTARIO INTERNATIONAL AIRPORT				
Airport Dr WB (Commerce Pkwy and Haven)	1,694	2,025	0.84	D
Airport Dr EB (Grove and Vineyard)	371	1,650	0.23	A
Vineyard (D St and Holt)	739	2,025	0.36	A
Archibald (I-10 Fwy and Airport Dr)	2,084	2,025	1.03	F
Airport Dr WB (Commerce Pkwy and Haven)	1,694	2,025	0.84	D
SAN DIEGO AIRPORT				
Pacific Hwy (Sassafras to Laurel)	4,800	4,500	1.07	F
Laurel St (Pac Hwy to Kettner)	3,300	3,000	1.10	F
Hawthorn St (Pac Hwy to Kettner)	2,800	2,700	1.04	F
Grape St (Pac Hwy to Kettner)	2,900	2,250	1.29	F
Pacific Hwy (Grape to Ash)	3,500	5,400	0.65	B
North Harbor Dr (Grape to Ash)	2,700	5,400	0.50	A
North Harbor Dr (Nimitz to Spanish)	3,400	5,400	0.63	B

The intercity highways aggregate roadway demand (total traffic volume), aggregate roadway capacity, and demand to capacity ratio are presented in Table 4.9.

Table 4.9 2020 Modal Alternative Vehicle Demand, Capacity Total V/C and LOS Across Highway Screenlines

INTERCITY HIGHWAY	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
I-10 (I-5 and East San Gabriel Valley)	10,263	9,750	1.05	F
I-10 (East San Gabriel Valley and ONT Airport)	12,876	9,750	1.32	F
I-10 (Ontario Airport and I-15)	12,275	9,750	1.26	F
I-10 (I-15 and I-215)	9,908	9,750	1.02	F
I-15 (I-10 and I-215)	8,858	7,800	1.14	F
I-215 (Riverside and I-15)	9,173	7,800	1.18	F
I-215 (I-10 and Riverside)	6,026	5,850	1.03	F
I-215 (I-15 and Temecula)	6,545	9,750	.50	A
I-15 (Temecula and Escondido)	7,146	7,500	0.95	E
I-15 (Escondido and Mira Mesa)	14,392	9,000	1.60	F
I-15 (Mira Mesa and SR 163)	18,105	10,800	1.68	F
SR 163 (I-15 and I-8)	9,456	9,000	1.05	F

4.2.4 Public Transit Impacts by Screenline or Cordon

Assuming that the future bus routes for the Ontario International Airport will be similar to baseline conditions, it is anticipated that there would be a low impact for the aviation component of the modal alternative on the transit system (Table 4.10).

There were two bus routes identified adjacent to San Diego International Airport under baseline conditions. Assuming that the future bus routes will be similar to baseline conditions, it is anticipated that there would be a low impact for the aviation component of the modal alternative on the transit system. Under the highway component, additional park-and-ride locations could be developed thereby providing some additional opportunities for passenger transfer to transit services. The impact of this additional highway to transit transfer opportunities is also expected to be low (Table 4.10).

Table 4.10 Public Transit Impacts with Modal Alternative

Airport	Impact
Ontario International Airport	**Low**
San Diego Airport	**Low**

4.2.5 Goods Movement Impact

Both airports have commercial uses which typically generate moderate truck traffic. Under the highway component, additional freeway capacity would make truck traffic flow better and could also attract additional trucks onto the freeway facilities. Assuming that future truck traffic will be generally similar to base line conditions, the Modal Alternative would have a medium impact on goods movement. Results are presented in Table 4.11.

Table 4.11 Truck Traffic Impacts with Modal Alternative

STATION	Impact
Ontario International Airport	**Medium**
San Diego Airport	**Medium**

4.2.6 Parking Impacts and Issues

Ontario International Airport currently has about 10,900 short and long term parking and the Airport has planned to increase parking spaces to 22,600 by 2030. San Diego International Airport currently has about 2,500 on-site short and long term parking spaces. The Airport is about to undertake master planning effort that will identify future parking spaces to be provided. Under the highway component the potential to develop additional park-and-ride facilities at strategic locations along the freeways could lead to increased parking supply while the expansion of the freeways to accommodate additional travel lanes could reduce available parking on existing streets and neighborhoods due to right-of-way takes and highway relocations. The Modal Alternative would have a high impact on parking. Results are presented in Table 4.12.

Table 4.12 Parking Impacts With Model Alternative

STATION	Impact
Ontario International Airport	**Low**
San Diego Airport	**Medium**

The traffic congestion in this corridor is projected to increase considerably in the next 20 years based on comparisons of Existing and No-Project conditions. The modal alternative would provide relief from the congestion delay as shown. The Modal Alternative is not expected to generate any significant impact on goods movements, public transit, parking and traffic impact in the vicinity of the Ontario International Airport and San Diego Airport, however, it would require substantial acquisition of right of way.

4.3 HIGH SPEED TRAIN ALTERNATIVE

4.3.1 Trip Generation by Rail Station

Based on the 2040 daily boardings, the 2020 inbound auto traffic generated at each sub-area along the corridor were calculated. The 2020 boardings are estimated to be 56% of the 2040 boardings based on the estimated total ridership for 2020 and 2040. Based on the mode of arrival and auto occupancy, auto trip generated at sub-areas were estimated. Next the segment-wide generated vehicle trips were divided into the corresponding stations based on the segment alignments. In San Diego County, the trip generation for the rail stations was calculated from the horizon year access requirements, which included ancillary demands. The results are shown in Table 4.13.

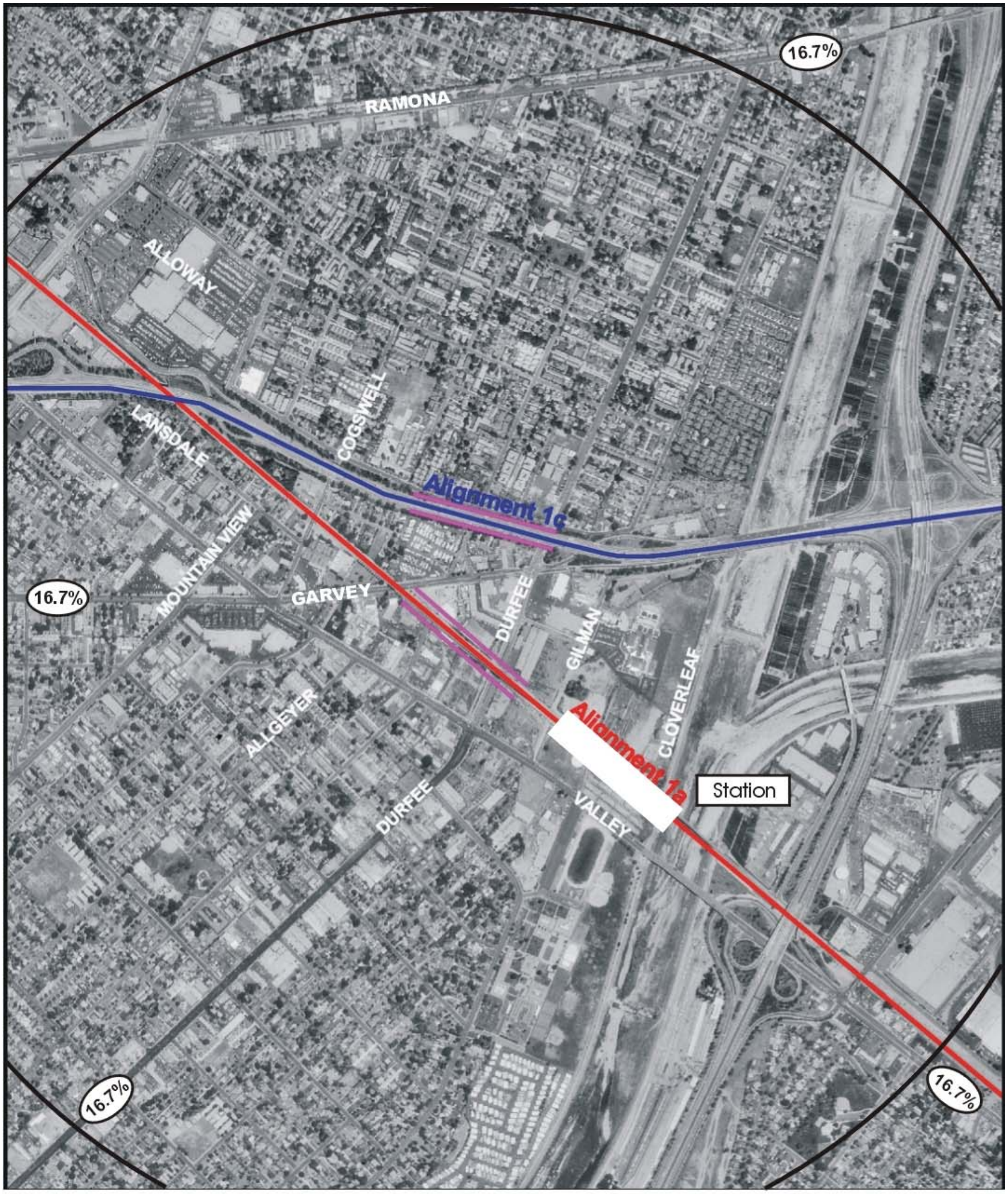
Table 4.13 – 2020 HSR Alternative AM Peak Hour Auto Trips

STATION	Number of Inbound Autos
El Monte Station (1A)	**532**
South El Monte Station (1B)	**266**
City of Industry Station (1B)	**266**
Pomona Station (1A)	**26**
Ontario Station (1A)	**26**
Colton Station (1A)	**89**
UCR Station (1A)	**63**
San Bernardino Station (1C)	**189**
March ARB Station (1A)	**63**
Temecula Station (2A)	**114**
Escondido Rock Springs (2A)	**490**
Mira Mesa (2A)	**200**
Qualcomm (3A)	**1180**
Escondido Transit Center (2B)	**490**
UTC Transit Center (3B)	**510**
San Diego Airport (3B)	**390**
Downtown San Diego (3B)	**390**

4.3.2 Distribution of Trips to/from Rail Station

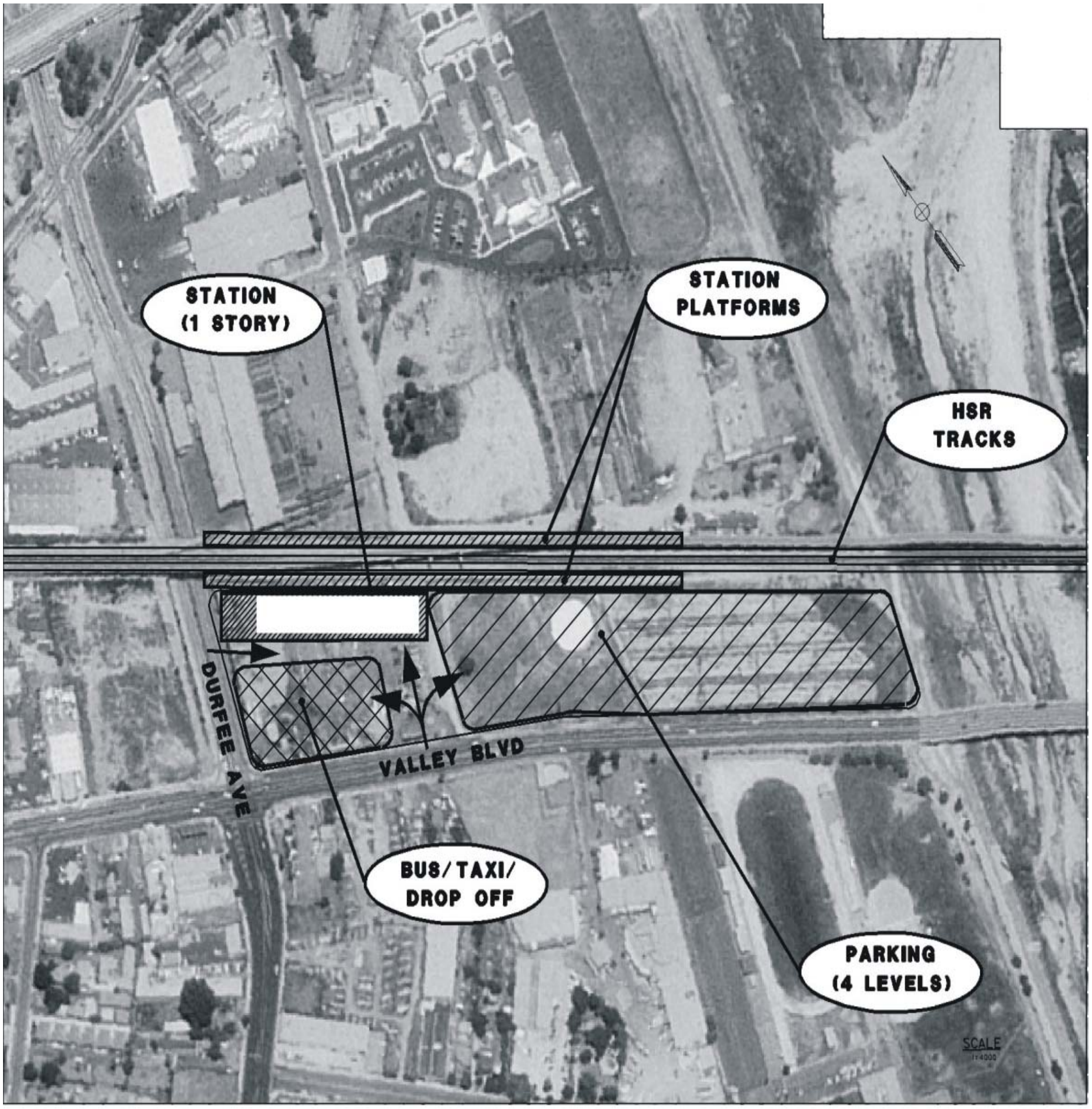
The inbound auto trips generated at the station are assumed to be evenly distributed across the primary roads along the screenline, excluding the freeways. The freeways are excluded based on the assumption that traffic heading toward the stations would be on local streets once they are within the one mile radius of the station. The project trip distribution was based on knowledge of the local and regional areas of residential and employment centers. Distributions for each station are shown in Figures 4.3 through 4.19.

Figure 4.3 El Monte Station Distribution Segment 1A



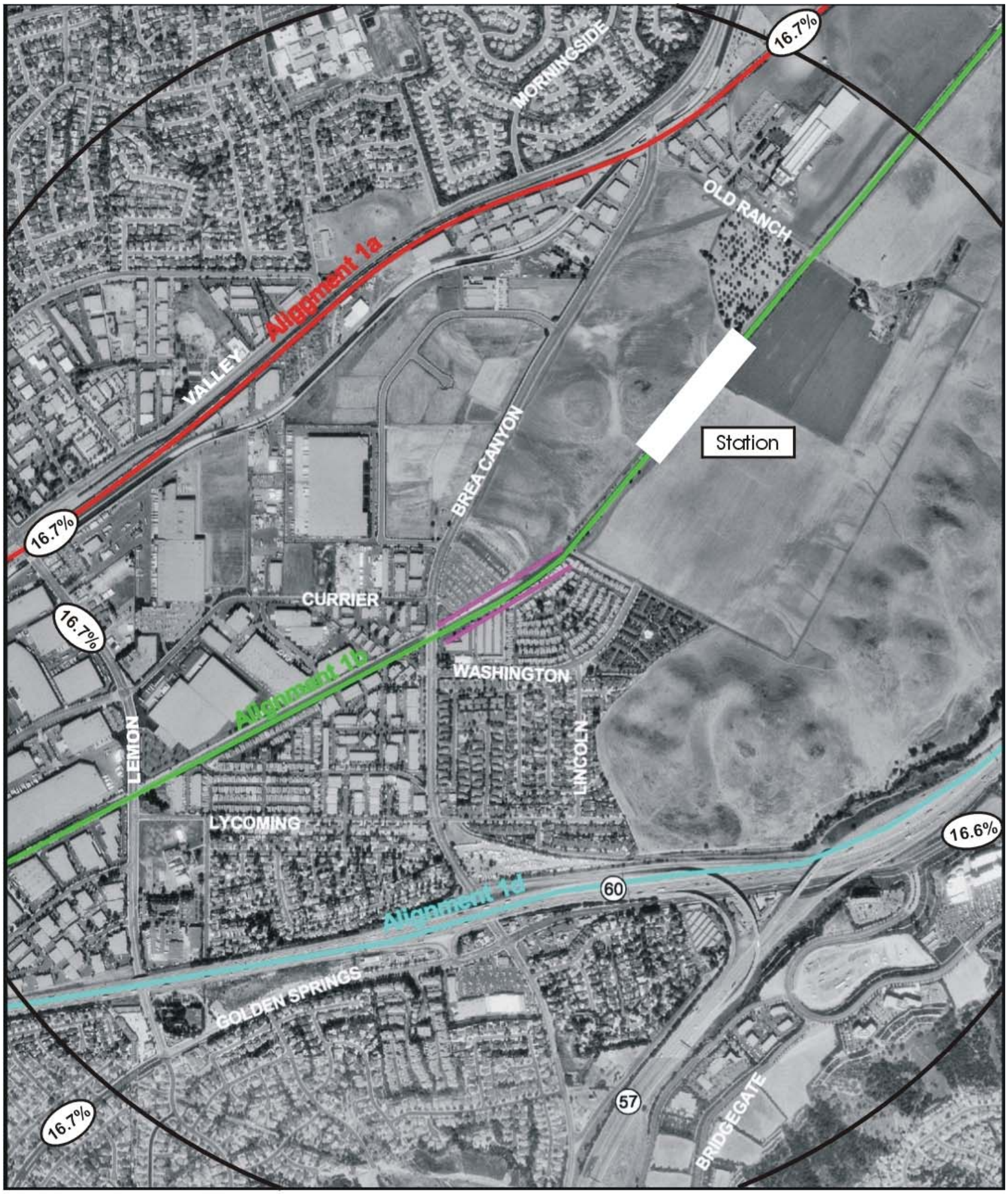
Peck northbound - 16.6%
Peak southbound - 16.6%

Figure 4.4 South El Monte Station Distribution Segment 1B



Santa Anita eastbound - 20%
Peck southbound - 20%
Workman Mill westbound - 20%
Workman Mill eastbound - 20%
Durfee northbound - 20%

Figure 4.5 Industry Station Distribution Segment 1B



Grand westbound - 16.6%